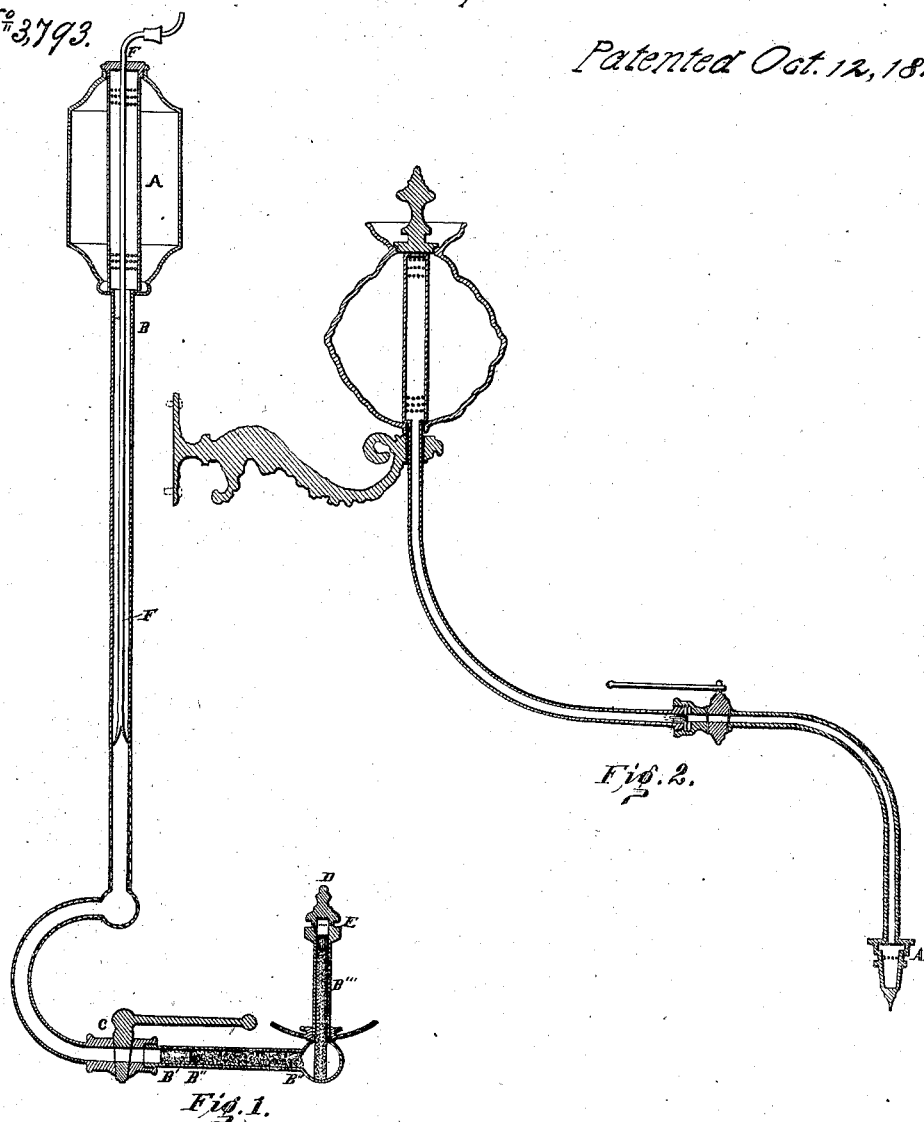


I. Jennings.
Lamp.

Patented Oct. 12, 1844.

N^o 3,793.



UNITED STATES PATENT OFFICE.

ISAIAH JENNINGS, OF NEW YORK, N. Y.

LAMP FOR BURNING VOLATILE INGREDIENTS.

Specification of Letters Patent No. 3,793, dated October 12, 1844.

To all whom it may concern:

Be it known that I, ISAIAH JENNINGS, of the city of New York, in the State of New York, have made a new and useful improvement in the manner of constructing lamps for the burning of volatile ingredients, by means of which improvement the supply of the fluid to be burned and its consequent combustion are regulated in a manner more perfect than heretofore.

In Figure 1, in the accompanying drawing, I have represented my lamp, in section.

A, is the reservoir for containing the ingredients; which descend therefrom, through the supply tube, B, to the stop cock, C, which may be opened to any desired extent. In the horizontal part, B', B'', of the tube, and close to the stop cock, C, I insert a roll, or piece of cotton cloth, or other like material, through which the volatile liquid will percolate slowly; this may occupy an inch, or nearly so, of the length of said tube. The remainder of the horizontal part of this tube, say from B'' to B'', I fill with fine wire, such as a roll of wire gauze, or of fine wire pressed together, and pushed in. This wire admits of a free passage to the liquid in passing to the burner, while it, at the same time, allows the lamp to be agitated without disturbing the fluid contained between the stop cock, C, and the burner. The vertical part, B''', of the supply tube I fill with cotton wick, cloth, or other absorbent material, which will, by capillary attraction, carry the volatile ingredients up toward the burner, D; but I do not continue the wick-like substance up to the top of said tube, but occupy its upper end, say for the length of half an inch, more or less, as at B''', with fine wire laid straight, and closely compressed together; this filling when cut off flat at the top will, when not very minutely examined, appear solid, but there will, of necessity, be fine interstices between the wire, through which the volatile liquid will pass in a state of vapor when the lamp is ignited; at other times its supply will be cut off by closing the cock, C.

My burner has the following peculiarity in its form. The apertures, which constitute the jets for the flame, open into a groove as shown at E; the use of this is to protect the issuing vapor from the action

of the ascending current of air always produced by the heat from combustion; this ascending current, when it strikes the gas, or vapor, immediately at its issue, has a disturbing influence on the flame, which is effectually corrected by the groove, E.

F, is a rod, or wire, by which the lamp may be suspended from a ceiling. This wire is split, or otherwise so formed at its lower end as to cause it to constitute a spring which shall slide with friction in the tube, B; and by the aid of this, the body of the lamp may be raised, or lowered, at pleasure. The rod F, passes through an opening in the center of the screw cap, G; which cap is removed for supplying fresh ingredients to the lamp, and in the upper part of the reservoir, A, I insert the safety apparatus for preventing the ignition of the volatile material within the reservoir, secured to me by Letters Patent.

When it is desirable to use this lamp entirely free from shadow below the flame, it may be made with the burner to turn down, as shown at A', Fig. 2. In this figure I have represented it as adapted to be fixed to a wall, and have not shown the wire and cotton filling of the tubes, this being the same as in Fig. 1.

Having thus, fully described the nature of my improvements in the lamp for burning volatile ingredients, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The manner of regulating the supply by the combined operation of the filling with cotton cloth, or other similar, fibrous substance, in the parts designated; together with the packing of wire interposed as at B'', and the termination of the supply opening in a cylindrical stopper of straight wires immediately below the burner, as described.

2. I claim, likewise, the employment of the groove E, in the burner, made in the manner, and for the purpose, set forth.

I do not claim either of the individual parts of the packing embraced in the first claim, but limit my claim to their combination with each other substantially as set forth.

ISAIAH JENNINGS.

Witnesses:

THOS. P. JONES,
WM. H. BISHOP.